



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/592,920	09/15/2006	Yoshito Iwasawa	450100-05495	8508

7590 02/26/2009  
William S. Frommer  
Frommer Lawrence & Haug  
745 Fifth Avenue  
New York, NY 10151

EXAMINER
----------

SCHWARTZ, JORDAN MARC

ART UNIT	PAPER NUMBER
----------	--------------

2873

MAIL DATE	DELIVERY MODE
-----------	---------------

02/26/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/592,920	<b>Applicant(s)</b> IWASAWA, YOSHITO	
	<b>Examiner</b> Jordan M. Schwartz	<b>Art Unit</b> 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/06, 4/08, 9/08</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

### **DETAILED ACTION**

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/JP05/02279, filed on February 15, 2005.

#### ***Specification***

The specification is objected to for the following reasons:

Throughout the specification applicant states that there is a "first group" and a "negative group at an object side..." which implies two separate groups. However, this is inconsistent with the figures which disclose the negative most object side lens element as part of the first group and not as a separate group. For clarity, throughout the specification it is suggested that applicant state "a negative subgroup at an object side relative to the reflection member" i.e. to disclose the "negative group" as a "negative subgroup" and therefore as part of the "first group".

In the specification, page 9, last paragraph, the specification states that "Figure 14A is a cross sectional view including optical path bending... In this state, the reflection mirror M...is withdrawn". However, Figure 14A apparently discloses the mirror within the optical path while Figure 14B discloses the reflection mirror in the withdrawn state. Further clarity is required.

#### ***Claim Objections***

Claims 1 and 3 are objected to for the following reasons. Since the intended meaning could be determined from what is set forth in the specification and figures, 112

Art Unit: 2873

rejections were not made but instead these lack of clarity issues are being raised in the following claim objections.

With respect to claims 1 and 3, claiming a “first group...and a negative group at the object side...” creates a lack of clarity. Specifically, this language implies two separate groups i.e. a claimed “first group” and a claimed “negative group”. From what is disclosed in the Figures (such as figure 1) apparently the negative lens element on the most object side of the system is not a separate group but instead is part of the “first group”. For clarity it is suggested that applicant claim “a first group...and a negative subgroup at an object side...” (which is the assumed meaning for purposes of examination).

With reference to claims 1 and 3, applicant claims the reflection member “withdrawn at the time of sinking lens barrel”. If the zoom lens comprises a lens barrel as is herein presumed then that needs to be claimed with greater clarity and particularity. Additionally, if the zoom lens undergoes a sinking operation into a lens body as is herein presumed then likewise that needs to be claimed with greater clarity and particularity. Specifically, it is suggested that applicant claim “said zoom lens is within a lens barrel, said lens barrel undergoing a sinking operation into a zoom lens system body, wherein the reflection member is withdrawn at the time of sinking...” for clarity.

With further reference to claims 1 and 3, the claimed “wherein the reflection member is withdrawn” creates a lack of clarity since it is not clear from what it is being withdrawn. Form what is disclosed in the figures, such as figure 14, it is apparently

Art Unit: 2873

being withdrawn from the optical axis. It is suggested that applicant claim “is withdrawn from the optical axis” to provide the required clarity.

With further reference to claims 1 and 3, the claimed “into a space thus defined” creates a lack of clarity. From what is disclosed in the figures, such as figure 14 the presumed meaning is “withdrawn from a space thus vacated by the withdrawn reflection member” and it is suggested that applicant use this language or similar language to provide greater clarity.

### ***Claim Rejections - 35 USC § 112***

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 3, applicant claims that the plural groups change spacing to thereby perform magnification changing or adjusting, that the first group (presumed meaning) is fixed during magnification changing or adjusting, that the second group is movable during magnification changing or adjusting, that the light quantity adjustment member is fixed during magnification changing or adjusting. However, neither the specification nor the claims disclose the difference between “changing” and “adjusting” rendering these claims vague and indefinite. Specifically, if one is changing the magnification then they are inherently adjusting the magnification and vice versa. If a distinction between “changing” and “adjusting” is intended as a limitation then it needs to be claimed (or disclosed in the specification) with greater clarity (without presenting

Art Unit: 2873

prohibited new matter) and if not then it is suggested that applicant delete “or adjusting” (with the latter being the assumed meaning).

In claims 1 and 3, applicant claims “a first group...and a negative subgroup (the assumed meaning)...and then claims “fixed during magnification changing”. It is not clear if applicant is claiming that the “first group” or the “negative subgroup” is fixed rendering the claim vague and indefinite. For purposes of examination the assumed meaning is “said first group fixed during magnification changing”.

With reference to claims 2 and 4, the claimed “lens group or groups of the object side...” renders the claims vague and indefinite. Specifically, the independent claims from which these depend claim just a single negative subgroup. Therefore, the claimed “or groups” renders the claims vague and indefinite. It is not clear if applicant is attempting to claim that more than one subgroup can be located on the object side of the reflection member. Since the specification and figures support just a single subgroup the assumed meaning is “wherein the negative subgroup of the object side relative to the reflection member...” and “fa: focal length of the negative subgroup of the object side...”.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mihara patent number 7,436,599 (Mihara'599) in view of Nishioka patent number 7,301,710.

Mihara'599 discloses the limitations therein including the following: a zoom lens (column 1, lines 10-15, Figures 5 and 17); composed of a plurality of groups adapted to change spacings to thereby perform magnification changing (Figure 5, example 5); comprising a first group including a reflection member to bend or fold the optical axis (Figure 5, example 5, "G1"); a negative subgroup at an object side relative to the reflection member (Figure 5, example 5, the negative lens on the object side of the reflection member); the first group fixed during magnification changing (Figure 5, example 5, column 2, lines 43-67); a second group movable during magnification changing at an image side of the first group and having negative power (Figure 5, example 5, column 2, lines 43-67, lens group "G4" as negative and moving during zooming); a light quantity adjusting member (Figure 5, example 5, the aperture stop); the zoom lens within a lens barrel (Figure 33, "113", column 35, line 43); the lens barrel undergoing a sinking operation into a zoom lens system body (column 9, lines 1-14); wherein the reflection member is withdrawn from the optical axis at the time of sinking of the lens barrel and the negative subgroup of the first group is accommodated into the space thus vacated by the withdrawn reflection member (column 9, lines 1-14, column 29, lines 29-36, figure 17). Mihara'599 further discloses the zoom lens system within an image pick-up device to convert the image into an electronic signal (column 1, lines 10-

Art Unit: 2873

14, column 11, line 55 to column 12, line 6); and the satisfaction of the mathematical condition of claims 2 and 4 (example 5 with  $f_a/f_w = 2.44$ ).

Mihara'599 discloses as is set forth above but discloses the light quantity adjustment member i.e. the stop movable and not fixed during magnification. Nishioka teaches that in a zoom optical system comprising a most object side lens group having a reflection member to bend the optical path and further comprising a stop located on the image side of the first lens group (abstract, figures 1 and 11) that the stop can either be movable or can be fixed for the purpose of providing a zoom lens system having a limited fluctuation of the height of rays with zooming and to provide a system of simpler construction (figures 1 and 11, column 49, lines 1-6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the zoom lens system of Mihara'599 as having a stop fixed on the optical axis since Nishioka teaches that in a zoom optical system comprising a most object side lens group having a reflection member to bend the optical path and further comprising a stop located on the image side of the first lens group, that the stop can fixed on the optical axis for the purpose of providing a zoom lens system having a limited fluctuation of the height of rays with zooming and to provide a system of simpler construction.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagimori et al patent number 6,754,446 in view of Mihara patent number 7,436,599 (Mihara'599).

Hagimori discloses the limitations therein including the following: a zoom lens (abstract); composed of a plurality of groups adapted to change spacings to thereby



Art Unit: 2873

perform magnification changing (abstract, figure 3, example 3, column 5, line 49 to column 6, line 4); comprising a first group including a reflection member to bend or fold the optical axis (Figure 3, example 3, abstract, column 8, lines 37-49, "Gr1"); a negative subgroup at an object side relative to the reflection member (Figure 3, example 3, the negative lens on the object side of the reflection member); the first group fixed during magnification changing (Figure 3, example 3, column 5, line 49 to column 6, line 4); a second group movable during magnification changing at an image side of the first group and having negative power (Figure 3, example 3, column 5, line 49 to column 6, line 4); a light quantity adjusting member fixed during magnification changing (Figure 3, example 3, the aperture stop, column 5, line 49 to column 6, line 4); the zoom lens within a lens barrel (column 10, lines 56-62); the lens barrel undergoing a sinking operation into a zoom lens system body (column 8, line 10); the zoom lens system within an image pick-up device to convert the image into an electronic signal (column 1, lines 10-21); and the satisfaction of the mathematical condition of claims 2 and 4 (example 3 with  $f_a/f_w = 3.0$ ).

Hagimori discloses as is set forth above including disclosing the zoom lens system comprising a mirror in the first lens group with an object side negative lens sub-component (figure 3, example 3, column 8, lines 37-49) and that the zoom lens system can be within a lens barrel that undergoes a sinking operation into the lens barrel (column 8, line 10, column 10, lines 56-62) but does not specifically disclose the reflection member withdrawn from the optical axis during the sinking operation and the negative lens subgroup accommodated into the space vacated by the withdrawn member.

Art Unit: 2873

Mihara'599 teaches that in a zoom lens system comprising a mirror in the first lens group with an object side negative lens sub-component and that the zoom lens system can be within a lens barrel that undergoes a sinking operation into the lens barrel (figures 5, 17 and 33, column 1, lines 10-15, column 9, lines 1-14, column 35, line 43), that the reflection member can be withdrawn from the optical axis during the sinking operation and the negative lens subgroup can be accommodated into the vacated space for the purpose of providing a system that provides a greater thickness reduction (column 9, lines 1-14, column 29, lines 29-36, figure 17). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the zoom lens system of Hagimori having the reflection member withdrawn from the optical axis during the sinking operation and the negative lens subgroup accommodated into the space vacated by the withdrawn member since Mihara'599 teaches that in a zoom lens system of similar structure, it is desirable to have the reflection member withdrawn from the optical axis during the sinking operation and the negative lens subgroup accommodated into the space vacated by the withdrawn member for the purpose of providing a zoom lens system having a greater thickness reduction.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is 571-272-2337. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30.

Art Unit: 2873

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jordan M. Schwartz  
Primary Examiner  
Art Unit 2873  
February 24, 2009

/Jordan M. Schwartz/  
Primary Examiner, Art Unit 2873